

# Mathematical modeling of the lysis of clots in blood vessels

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## Abstract

A mathematical model of the lysis of clots in blood vessels has been constructed on the basis of convection-diffusion equations. The fibrin clot is considered as an immobile solid phase, and the plasminogen, plasmin, and plasminogen activators - as dissolved liquid phases. As a result of the numerical solution of the model, dependences predicting the development of the lysis process have been obtained. An important role of clot swelling in the process of lysis has been revealed. © 2011 Springer Science+Business Media, Inc.

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## Keywords

Clot, Convection-diffusion equations, Fibrin, Lysis model, Plasmin, Plasminogen, Plasminogen-activator